WHAT IS CLAIMED IS

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1. An image processing apparatus comprising:

a command analyzing unit obtaining color information of each endpoint of an object by analyzing a drawing command;

10 a draw processing unit obtaining the color information of successive scanned points inside the object through incremental interpolation of the color information, thereby successively producing the color information for an entirety of the object; and

15 an image processing unit processing the color information outputted by the draw processing unit.

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2. The image processing apparatus as claimed in claim 1, wherein the draw processing unit includes:

a setup unit obtaining differential coefficients of the color information in horizontal and

25 vertical directions of the object, with a plane equation

of the object with respect to the color information of
each endpoint of the object;

a start point computing unit obtaining X-Y
coordinates and the color information of a start point
5   situated on a left or right side of the object and on a
given horizontal line by referring to said each end
point and the differential coefficients; and

a horizontal color information interpolating
unit interpolating color information along the given
10 horizontal line in accordance with the X-Y coordinates
and the color information of the start point and the
differential coefficients in the horizontal direction.

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3.   The image processing apparatus as claimed
in claim 2, wherein the setup unit computes respective
color information corresponding to said each endpoint in
20 parallel.

25   4.   The image processing apparatus as claimed

in claim 2, wherein the start point computing unit
includes:

a vertical X value interpolating unit
interpolating an X value in the vertical direction by
5   referring to said each end point; and

a vertical color information interpolating
unit interpolating color information in the vertical
direction by referring to said each end point.

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5.   The image processing apparatus as claimed
in claim 2, wherein the horizontal color information
15   interpolating unit interpolates respective color
information corresponding to the color information
obtained by the start point computing unit, in parallel.

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6.   The image processing apparatus as claimed
in claim 2, wherein the draw processing unit further
includes a color information interpolating unit
25   controlling change of color by interpolating color in

horizontal and vertical directions in accordance with a
mesh, which is shaped as a square surrounding the object
and is divided into minimal color lengths in vertical
and horizontal directions.

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7.   The image processing apparatus as claimed
10   in claim 1, wherein the image processing unit includes a
color conversion unit converting color information
obtained from the draw processing unit.

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8.   The image processing apparatus as claimed
in claim 7, wherein the image processing unit includes a
halftone unit halftoning the color information converted
20   in the color conversion unit.

25   9.   The image processing apparatus as claimed

in claim 8, wherein the halftone unit includes a fixed length data generation unit converting the halftoned color information into word length for a band data storage unit.

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10. An image processing method comprising the

10   steps of:

a) obtaining color information of each endpoint of an object by analyzing a drawing command;

b) obtaining the color information of successive scanned points inside the object through

15   incremental interpolation of the color information, thereby successively producing the color information for an entirety of the object; and

c) processing the color information outputted in step b).

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11. The image processing method as claimed in

25   claim 1, wherein step b) includes the steps of:

d) obtaining differential coefficients of the color information in horizontal and vertical directions of the object, with a plane equation of the object with respect to the color information of each endpoint of the

5   object;

e) obtaining X-Y coordinates and the color information of a start point situated on a left or right side of the object and on a given horizontal line by referring to said each end point and the differential

10   coefficients; and

f) interpolating unit interpolating color information along the given horizontal line in accordance with the X-Y coordinates and the color information of the start point and the differential

15   coefficients in the horizontal direction.

20   12.   The image processing method as claimed in claim 11, wherein respective color information corresponding to said each endpoint is computed in parallel in step d).

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13. The image processing method as claimed in claim 11, wherein step e) includes the steps of:

g) interpolating an X value in the vertical direction by referring to said each end point; and

h) interpolating color information in the vertical direction by referring to said each end point.

14. The image processing method as claimed in claim 11, wherein respective color information corresponding to the color information obtained in step e), is interpolated in parallel.

15. The image processing method as claimed in claim 11, wherein step b) further includes a step of:

i) controlling change of color by interpolating color in horizontal and vertical directions in accordance with a mesh, which is shaped as

a square surrounding the object and is divided into minimal color lengths in vertical and horizontal directions.

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16. The image processing method as claimed in claim 10, wherein step c) includes a step of:

10   j) converting color information obtained in step b).

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17. The image processing method as claimed in claim 16, wherein step c) includes a step of:

k) halftoning the color information converted in step j).

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18. The image processing method as claimed in

25 claim 17, wherein step k) includes a step of:

1) converting the halftoned color information into word length for a step of storing band data.

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19.   An image processing program comprising the functions of:

a) obtaining color information of each

10   endpoint of an object by analyzing a drawing command;

b) obtaining the color information of successive scanned points inside the object through incremental interpolation of the color information, thereby successively producing the color information for

15   an entirety of the object; and

c) processing the color information outputted in function b).

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20.   The image processing program as claimed in claim 19, wherein function b) includes the functions of:

25   d) obtaining differential coefficients of the

color information in horizontal and vertical directions of the object, with a plane equation of the object with respect to the color information of each endpoint of the object;

5   e) obtaining X-Y coordinates and the color information of a start point situated on a left or right side of the object and on a given horizontal line by referring to said each end point and the differential coefficients; and

10   f) interpolating unit interpolating color information along the given horizontal line in accordance with the X-Y coordinates and the color information of the start point and the differential coefficients in the horizontal direction.

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          21. The image processing program as claimed
20   in claim 20, wherein respective color information corresponding to said each endpoint is computed in parallel in function d).

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22. The image processing program as claimed in claim 20, wherein function e) includes the functions of:

5   g) interpolating an X value in the vertical direction by referring to said each end point; and

h) interpolating color information in the vertical direction by referring to said each end point.

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23. The image processing program as claimed in claim 20, wherein respective color information 15 corresponding to the color information obtained in function e), is interpolated in parallel.

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24. The image processing program as claimed in claim 20, wherein function b) further includes a function of:

i) controlling change of color by 25 interpolating color in horizontal and vertical

directions in accordance with a mesh, which is shaped as a square surrounding the object and is divided into minimal color lengths in vertical and horizontal directions.

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          25.   The image processing program as claimed
10   in claim 19, wherein function c) includes a function of:
          j) converting color information obtained in
function b).

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          26.   The image processing program as claimed
in claim 25, wherein function c) includes a function of:
          k) halftoning the color information converted
20   in function j).

25   27.   The image processing program as claimed

in claim 26, wherein function k) includes a function of:

1) converting the halftoned color information into word length for a function of storing band data.